



Focus

The Economic Benefits of Clean Air

Background information

The federal Clean Air Act requires the Environmental Protection Agency (EPA) to set air quality standards in order to protect human health and the environment. Areas of the state that violate these standards are designated “nonattainment,” while all other areas are designated either attainment or unclassifiable. States with nonattainment areas must develop and implement cleanup plans, known as attainment plans. Fourteen areas of Washington State have been designated as nonattainment. Over three million people live within these areas. Twelve of these 14 areas are now measuring clean air that meets standards. However, several areas of the state are meeting standards by only a very thin margin. In addition, recent research has found that health effects of one of these six air pollutants, fine particulate matter, occur at levels well below the federal standard. This has raised concerns about how well strategies designed to help areas meet federal standards are protecting public health..

In addition to the six air pollutant for which standards exist, hundreds of other chemicals, known as toxic or hazardous air pollutants, enter the atmosphere from a wide variety of sources. These chemicals are not subject to national ambient, health-based standards. The level of public health and environmental damage they cause is relatively uncertain.

The benefits of keeping our air clean

- Washington citizens save more than \$2 billion per year in health costs because the air is cleaner now than it was in 1990.
- Cleaner air provides an economic benefit to Washington’s tourism and recreation industry of at least \$49 million per year through visibility improvements.
- Washington businesses save at least \$17 million per year because cleaner air means fewer lost workdays or lost productivity due to illness caused by air pollution, according to EPA.
- Cleaner air helps Washington farmers by preventing more than \$11 million per year in crop damage, according to EPA.

The cost of failure

Economic impacts

- In nonattainment areas, new or expanding businesses that release air pollution must apply the most stringent and costly controls available. In addition, they must offset any increased pollution by reducing equivalent pollution from other sources in the nonattainment area. These requirements mean increased costs, less likelihood of investment in new facilities, and a compromised economic climate for business growth.
- A return to ozone nonattainment in central Puget Sound and Clark County would require cleaner gasoline and additional pollution controls, costing businesses an estimated \$253 million.
- A return to ozone nonattainment in central Puget Sound would require use of cleaner, lower volatility gasoline, costing consumers an extra one cent per gallon, or more than \$10 million per year.
- A nonattainment designation results in loss of state and local control over clean air strategies. EPA becomes the primary decision-maker.

Health impacts

- Based on EPA estimates of cancer risks and measured pollution levels in Washington, 11 high risk Hazardous Air Pollutants (HAPs) out of the hundreds of HAPs create cancer risks at least 10 times higher than acceptable in our cleanest counties. This increases to more than 500 times higher in our dirtiest counties. This may result in as many as 30 cancer cases per year in Washington that would not otherwise have occurred. The cost of medical treatment alone for these is about \$3,000,000. Health effects from air pollution also result in other high economic costs to Washington citizens in the form of lost work days, minor restricted activity days, hospital admissions for cardiovascular and respiratory symptoms, and premature death.
- Recent studies have associated short-term exposure to particulate matter with decreased lung function, increased symptoms of respiratory irritation, increased use of asthma medications, and increased hospitalization for asthma at levels well within current federal standards. Exposure to particulate air pollution has been associated with increased deaths and higher rates of lung cancer, costing Washington citizens millions of dollars in additional medical bills. For example, the State and Territorial Air Pollution Program Administrators/Association of Local Air Pollution Control Organizations estimates that \$1,353,000,000 in medical costs in Washington could be avoided by 2030 if controls like those planned for on-road diesels are phased in for non-road diesels, as well.
- In addition to affecting people with chronic lung and heart diseases, all air pollutants have especially adverse effects on the very old and the very young. Of particular concern are those people who are active outdoors (for example, those who work in polluted city conditions, joggers, and children playing outdoors), since physical activity results in deep breathing and greater pollutant doses.

What are we doing to help Washington meet air quality standards?

The Department of Ecology (Ecology) works in concert with EPA and seven local air quality agencies around the state to clean up air pollution problems and prevent future problems. Ecology's activities are geared toward understanding air pollution and its sources, designing cost-effective solutions, and measuring the effectiveness of those solutions. Programs for reducing emissions from motor vehicles, issuing permits for businesses and industries, reducing outdoor burning emissions, and monitoring air quality to ensure the availability of accurate data on pollution levels around the state have helped improve air quality significantly since the early 1990s. Ecology is working collaboratively with federal, state, and local agencies, citizens, and industry partners to provide quality service and products. Some examples of ways in which the Air Quality Program is working toward more cooperative approaches and customized, local solutions to environmental problems are:

- Customer advocacy in vehicle repairs and teamwork with the emission testing contractor, Agbar, Inc., to implement new emission testing changes;
- Industry partnerships regarding revision of regulations for insignificant emission units and prevention of significant deterioration (PSD) delegation;
- A memorandum of agreement with the Washington Association of Wheat Growers to voluntarily reduce field burning emissions;
- Individualized burn permits and customized burn calls for agricultural burning, as well as the creation of a web-based burn permit system;
- A focus on more custom tailored permitting for industrial facilities, such as the Tacoma Steam Plant; and
- An improved web site that provides opportunities for users to give comments and complaints, as well as receive prompt responses to questions.

Even with our current air quality efforts, however, several areas of Washington, including Wallula, Yakima County, and Spokane County, continue their nonattainment status. Others, including Puget Sound and Spokane, are meeting air quality standards by only a very thin margin. Most urban areas

remain close to violating one or more federal air quality standards. Special monitoring studies show the potential for violations in several new areas such as Colville and parts of the Columbia plateau, as well. Population growth, increased vehicle use, and economic expansion continue to pose challenges to Washington's tenuous hold on clean air. It will take vigilance and the combined efforts of business, government, and citizens to sustain our air quality gains and protect the health of our citizens and the economic vitality of our state.

For more information

General Air Quality Program information	Mary Burg Air Quality Program Manager (360) 407-6880.
Permitting information for businesses and industries	Al Newman (360) 407-6810
Agricultural burning permit information	Karen Wood (509) 456-5010
Emission Check Program information	John Raymond (360) 407-6856

Please visit the Air Quality Program web site at <http://www.ecy.wa.gov/programs/air/airhome.html> for publications, materials, and other information about various air quality activities.

If you require this document in an alternative format, please call Judy Beitel at (360) 407-6878 (voice) or (360) 407-6006 (TTY only).